

# **SDMS US EPA REGION V -1**

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DOCUMENTS.**

Answers to U.S. EPA Questionnaire  
 on TCDD, 10-3-83

Q 1.1 Has W.G.K. ever manufactured 2,4,5 Trichlorophenol (2,4,5 TCP)?

A 1.1 No

Q 1.2 What 2,4,5 TCP formulations or derivatives has W.G.K. ever manufactured or processed?

- A 1.2
- a. Sodium 2,4,5 Trichlorophenolate
  - b. 2,4,5 Trichlorophenoxyacetic Acid
  - c. Iso-Octyl 2,4,5 Trichlorophenoxyacetate
  - d. Butyl 2,4,5 Trichlorophenoxyacetate
  - e. Iso-butyl 2,4,5 Trichlorophenoxyacetate

Q 1.2.1 What were the dates of manufacturing and quantities produced in Q 1.2?

A 1.2.1

<u>Chemical</u>	<u>Dates</u>	<u>Quantities(lbs.)</u>	<u>Notes</u>
a. Sodium 2,4,5 Trichlorophenolate	1949 1950-53	20,000 -	50% Solution See Note A
b. 2,4,5 Trichlorophenoxyacetic Acid		N/A	See Note B
c. Iso-octyl 2,4,5 Trichlorophenoxyacetate	1966 1967 1968 1969 1970	450,000 500,200 664,385 1,367,860 911,051	See Note C See Note D See Note D See Note D
d. Butyl-2,4,5 Trichlorophenoxyacetate	1966 1967 1968 1969	3,300,000 3,302,880 6,122,196 153,382	See Note C See Note D See Note D See Note D
e. Iso-butyl 2,4,5 Trichlorophenoxyacetate	1969	44,310	See Note D

Q 1.2.2 What were the product names in Q 1.2?

- A 1.2.2
- a. Santophen 45
  - b. 2,4,5 T
  - c. Iso-octyl 2,4,5 T ester
  - d. Butyl 3,4,5 T ester
  - e. Iso-butyl 2,4,5 T ester

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Q 2.1 Has W.G.K. ever sold 2,4,5 TCP or its derivatives for use as a feedstock?

A 2.1 (Per chemical designation in A 1.2)

- a. See Note A
- b. See Note B
- c. See Note E
- d. See Note E
- e. See Note E

Q 2.2 Names and Addresses for A 2.1?

A 2.2 N/A

Q 2.2.1 Approximate amounts and dates for A 2.2?

A 2.2.1 N/A

Q 2.2.2 Copies of halogenated dioxin analyses for A.2.1?

A 2.2.2 See Note F

Q 3.1 Has W.G.K. ever manufactured or processed any other chemical substances using equipment that at one time was used in the manufacture of 2,4,5 TCP or its derivatives?

A 3.1 See Note G

Q 3.2 Names of substances in A.3.1?

A 3.2 N/A

Q 3.2.1 Dates and quantities of substances in A 3.2?

A 3.2.1 N/A

Q 3.2.2 Product names of substances in A 3.2?

A 3.2.2 N/A

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Q 4.1 During what part of the manufacturing/processing (implied processes for chemicals in A 1.2) were wastes generated and where collected?

A 4.1 (Per chemical designation in A 1.2)

- a. See Note H
- b. N/A used as feedstock for c, d, e.
- c. See Note I
- d. See Note J
- e. See Note J

Q 4.2 Describe chemical composition of these wastes in Q 4.1?

A 4.2 (Per chemical designation in A 1.2)

- a. See Note K
- b. N/A
- c. See Note K
- d. See Note L
- e. See Note L

Q 4.2.1 Copies of halogenated dioxin analyses for A 4.2?

A 4.2.1 See Note F

Q 4.3 Was a specific refining or distillation process employed to remove or reduce levels of dioxins (in processes of Q 4.1)?

A 4.3 (Per chemical designation in A 1.2)

- a. See Note M
- b. N/A
- c. See Note M
- d. See Note M
- e. See Note M

Q 4.4 What amounts of wastes were generated per volume of finished product (in process of Q 4.1)?

A 4.4 (Per chemical designation in A 1.2)

- a. See Note A
- b. N/A
- c. See Note I
- d. See Note N
- e. See Note M

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Q 4.5 Were the wastes in A 4.4 combined with wastes from the previous processes?

A 4.5 See Notes A, O

Q 5.1 Were any decontamination procedures used on any equipment that at any time was used for the manufacturing of 2,4,5 TCP and its derivatives?

A 5.1 No descriptions of decontamination procedures were found for any of the mentioned processes.

Q 5.2 Where is the equipment now?

A 5.2 (Per chemical designation in A 1.2)

- a. See Note A
- b. N/A
- c. See Note P
- d. See Note P
- e. See Note P

Q 5.3 Describe chemical composition of wastes from the decontamination procedures in Q 5.1.

A 5.3 No records were found which show any composition of decontamination streams in any process.

Q 5.3.1 Any copies of halogenated dioxin analysis from) Q 5.3?

A 5.3.1 See Note F

Q 5.4 Were these wastes combined with any other wastes from other processes?

A 5.4 See Note O

Q 6.1 Describe the methods of collection, treatment, storage, and disposal of the wastes identified in Q 4 & 5.

A 6.1 See note O

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Q 6.2 What were the names, addresses and or locations of any waste haulers and treatment storage and disposal sites utilized?

A 6.2 See Note O

A 7.1 Provide the total amount of waste addressed in Q 6.

A 7.1 See Note O

Q 7.2 Provide total amount currently in storage.

A 7.2 There are not amounts from any of the processes currently in storage.

Q 7.3 Provide total amounts of such wastes treated or disposed of at each identified site and the dates of treatment or disposal.

A 7.3 See Note O

Q 8.1 If halogenated dioxin testing was done to the wastes identified in Q 4 and Q 5, provide the dates of the sampling, analytical and sampling methods, and results.

A 8.1 See Note F

Q 9.1 Provide all other documents produced by or for your facility that relate to halogenated dioxin analyses of ground water, surface water, soils and any other environmental media.

A 9.1 All available dioxin results were sent to the EPA with our initial response.

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- A. All information on this pilot plant operation came from old research reports. Manufacturing data after 1950 was not found. Also, a search of our records did not locate which equipment was used, disposition of the equipment, use of the chemical waste production, nor customers.
- B. A search of our records indicates that this chemical was not manufactured at our site, but transferred from Monsanto's Nitro West Virginia Plant and used as an ester feedstock.
- C. This number was estimated from raw material usage obtained from cost sheets.
- D. This number was obtained from cost sheet copies.
- E. A search of our records did not find any data indicating this chemical was used as a feedstock.
- F. A search of our records found no copies of halogenated dioxin analyses.
- G. A search of our records was unable to identify if any other chemical was manufactured in the mentioned equipment. See also note A above.
- H. (See attached Schedule I) Research records indicate that wastes were generated during the autoclave reaction stage and distillation stage. They were collected in drums off the bottom of the methanol still. Some wastes were also probably collected in the filter after neutralization.
- I. No records were found on waste generation for this process. However, since production of this chemical was nearly identical to that of Butyl 2,4,5 T, waste generation may also be assumed similar.
- J. (See attached Schedule II) Manufacturing process records indicate that wastes were generated in the pre-reactor tank and main glass lined reactor. Wastes were collected in a leaf filter after neutralization. Flow streams also indicate losses through the vacuum steam jet off the reactor. No other collection points were indicated.
- K. No composition data was found in any records.
- L. Manufacturing process records show that discharge from the vacuum steam jet contained organics at the following compositions:
- |                              |     |
|------------------------------|-----|
| Toluene                      | 39% |
| Alcohol (Iso-butyl or Butyl) | 39% |
| 2,4,5,7 (Iso-butyl or Butyl) | 22% |
- This data was referenced at capacity production.
- M. A search of records indicate that no such process was employed.

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- N. From manufacturing process records of the vacuum jet discharged stream, at capacity ester production (13,200,000 lb./year).

lbs./Month Atmospheric, Stream, & Residue Discharge

Toluene	53,300
Alcohol (Iso-butyl or Butyl	53,300
2,4,5 T Ester (Iso-butyl or Butyl)	31,200

- O. No records were found detailing disposition of any collected wastes, though Monsanto personnel probably handled it. Sewered streams were disposed of through the Sauget sewer system.
- P. Records show that the department manufacturing this chemical was sold to the Edwin Cooper Company, Sauget, Illinois in May of 1971. It is believed all equipment was intact at time of sale.

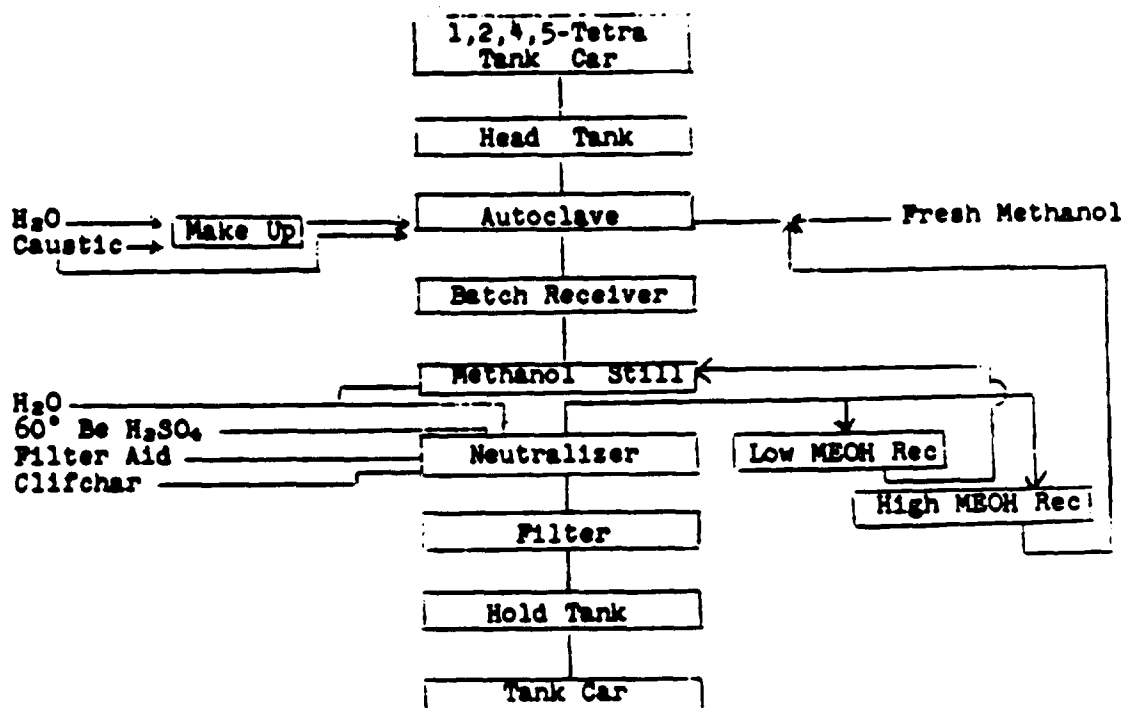
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SODIUM 2,4,5 TRICHLOROPHENATE

5.

FLOW SHEETIV. FLOW SHEET

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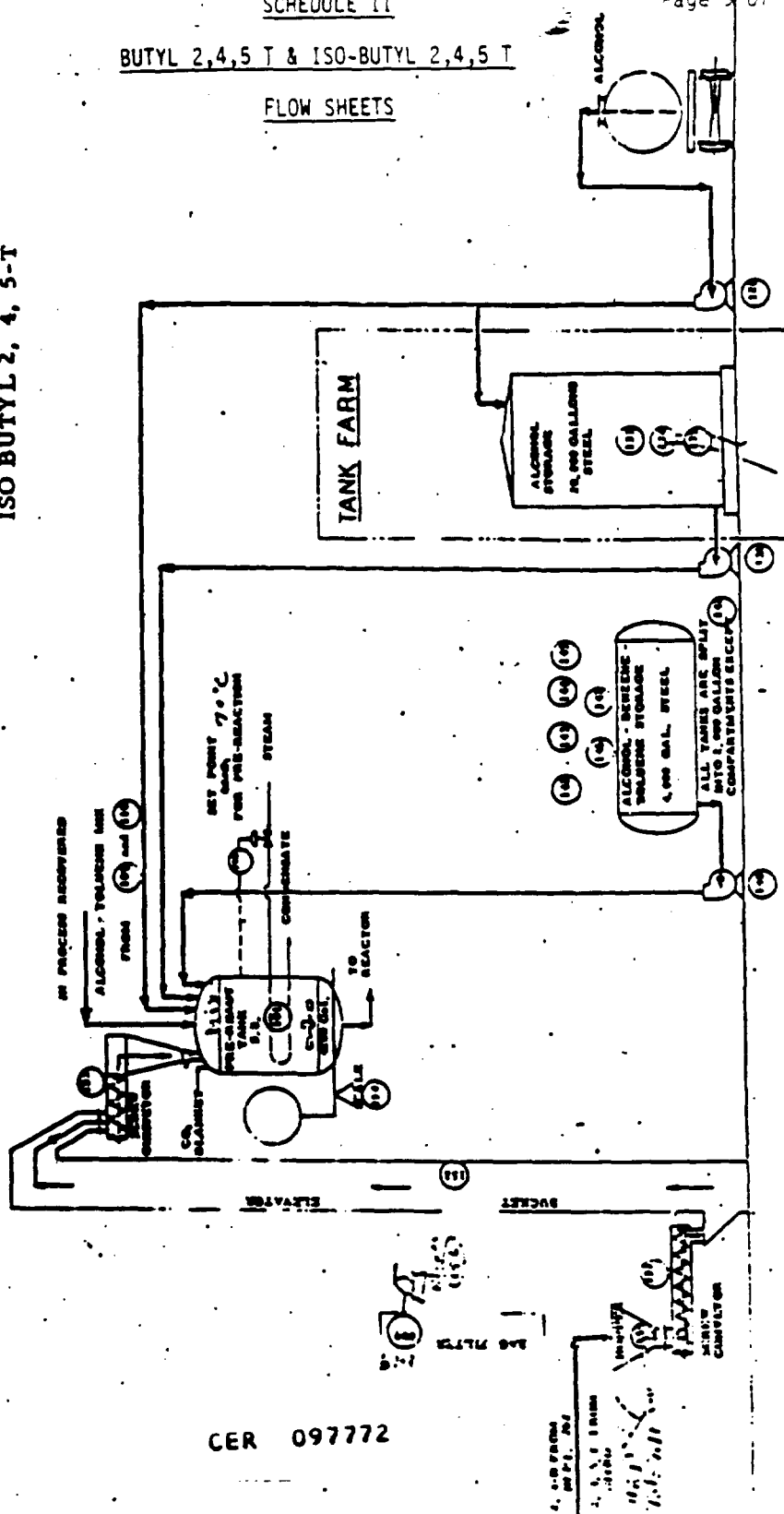
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**BUTYL 2, 4, 5-T**  
**ISO BUTYL 2, 4, 5-T**

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BUTYL 2,4,5 T & ISO-BUTYL 2,4,5 T

FLOW SHEETS



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### B. REACTION

DEPT. 260 AG ESTERS

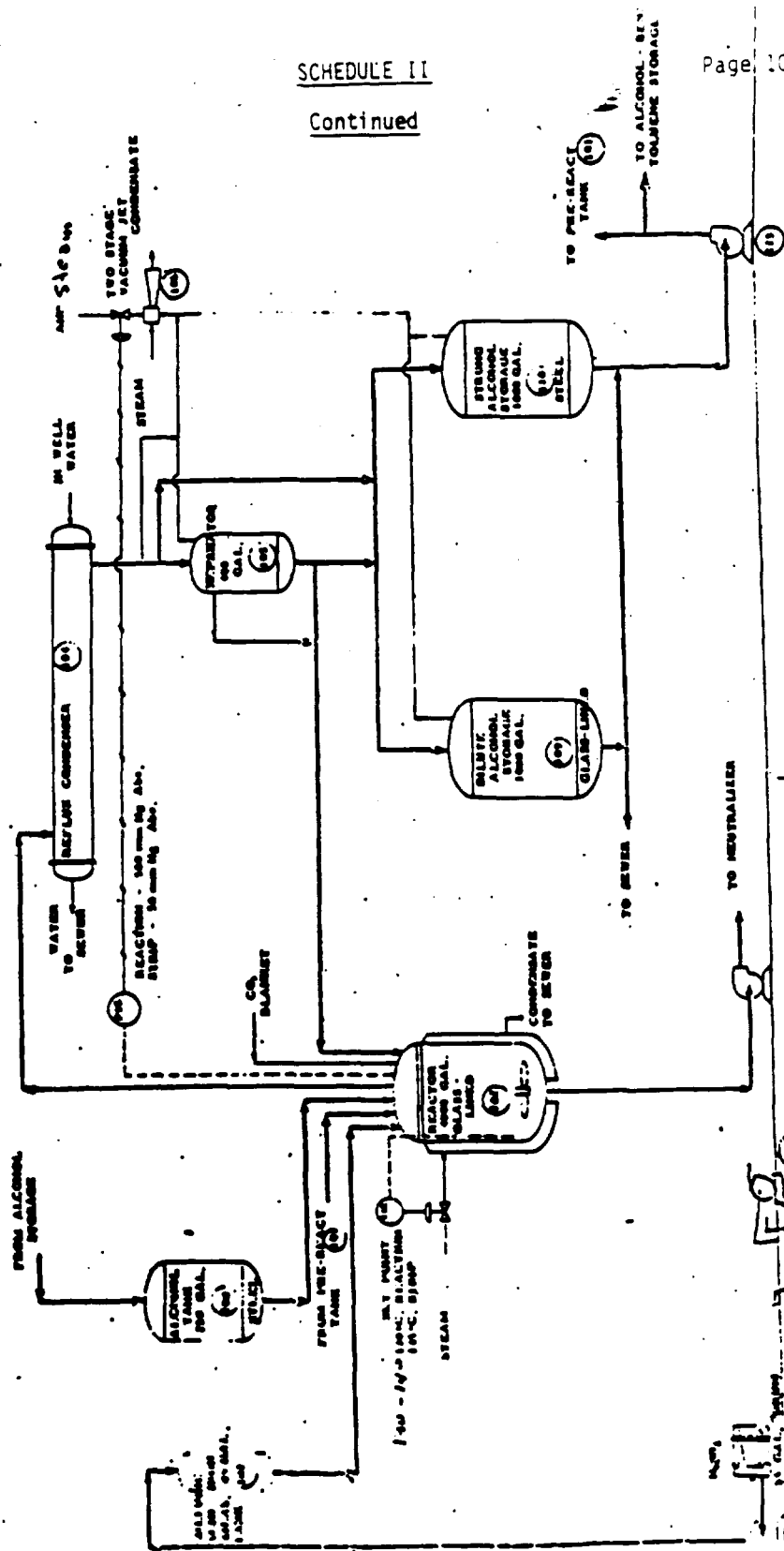
**BUTYL 2, 4, 5-T**

ISO BUTYL 2, 4, 5-T

SCHEDULE II

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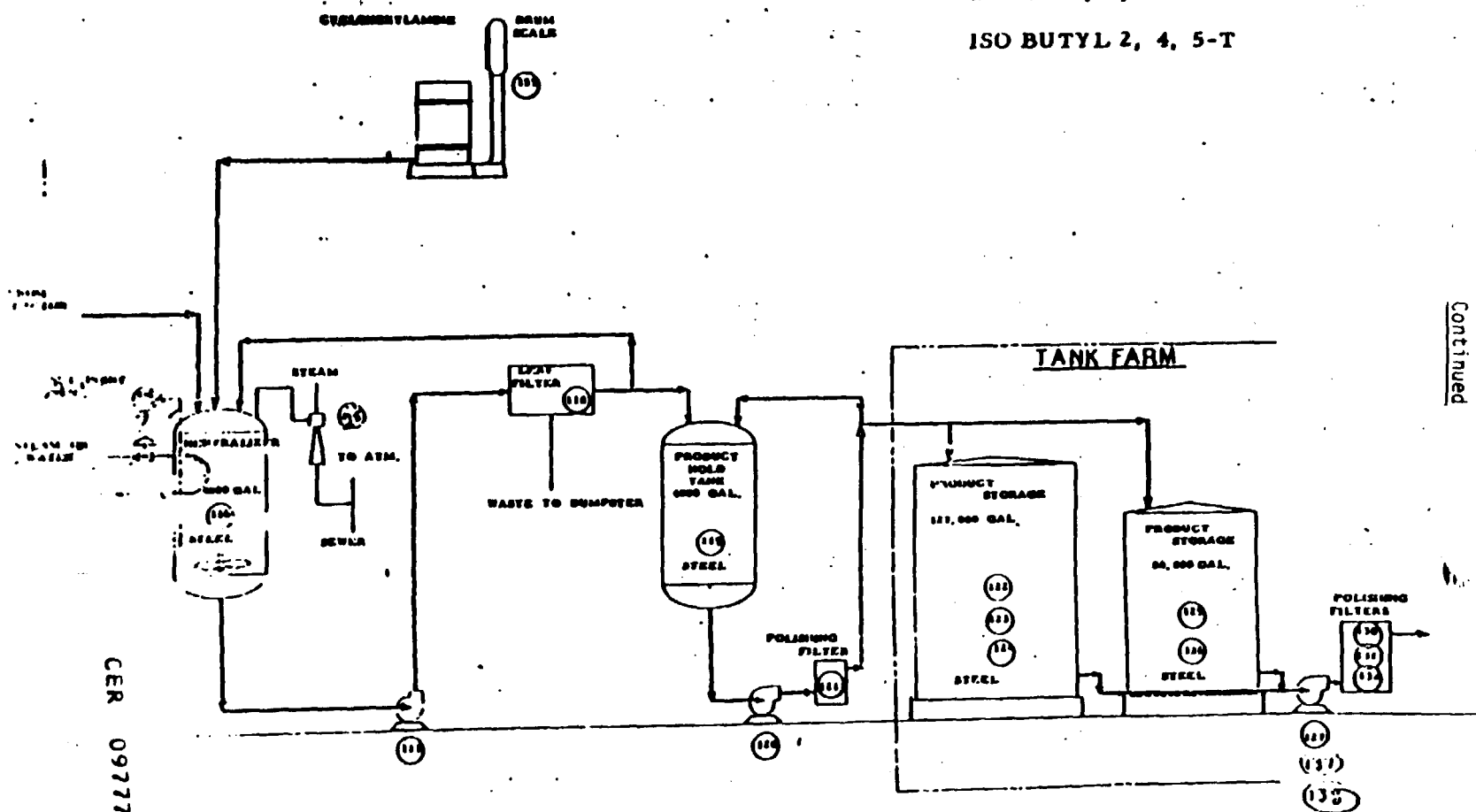
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**C. NEUTRALIZATION & FILTRATION**  
**DEPT. 268 AG ESTERS**

**BUTYL 2, 4, 5-T**

**ISO BUTYL 2, 4, 5-T**



SCHEDULE II  
 Continued

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